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## ABSTRACT OF THE DISCLOSURE

A system for improved decryption performance includes a computer in electronic communication with an encrypted network. A controller performs a decryption operation on an encrypted packet received from the network, and the computer asserts an interrupt prior to the system completing transfer of the decrypted packet back to host memory to reduce the additional latency a packet suffers during Secondary Use. An additional interrupt may be asserted after the Secondary Use operation is complete, to ensure that the Secondary Use packet is processed. A method for improving decryption performance similarly includes asserting an interrupt prior to the complete transfer of a decrypted packet from a controller back to host memory during Secondary Use. The method may further include asserting an additional interrupt after the Secondary Use operation is complete, to ensure that the Secondary Use packet is processed.